



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,163	10/23/2003	Reiner Eschbach	D/A2327	1667

7590 02/13/2006  
Ortiz & Lopez, PLLC  
P.O. Box 4484  
Albuquerque, NM 87196-4484

EXAMINER
----------

ABEL JALIL, NEVEEN

ART UNIT	PAPER NUMBER
----------	--------------

2165

DATE MAILED: 02/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/693,163	<b>Applicant(s)</b> ESCHBACH ET AL.	
	<b>Examiner</b> Neveen Abel-Jalil	<b>Art Unit</b> 2165	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Remarks**

1. The Amendment filed on January 7, 2006 has been received and entered. Claims 1-20 have been cancelled. Claims 21-36 have been newly added. Therefore, claims 21-36 are now pending.

### ***Claim Objections***

2. Claims 21, 28, and 36 are objected to because of the following informalities:

Claim 21, line 14, and Claim 28, lines 16, & 17, and Claim 36, lines 10, & 11, recite the limitation “enabling” is in the indicated lines.

The Examiner points to MPEP 2106 [R-2] wherein the claim’s recitation of “enabling” raises the question to Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation.

Office personnel must rely on the applicant’s disclosure to properly determine the meaning of \*\* the claims. Limitations appearing in the specification but not recited in the claim are not read into the claim; therefore, in this case, the recitation of “enabling” as interpreted in light of the specification provide the “functionality” or “the capability” of the database management system to perform the steps without definite disclosure limiting or excluding any alternative, negative, or even all together suggest actually performing or implementing the functionality that is database management system is capable of.

Therefore, any cited art that teaches the steps otherwise in the alternative can be used to reject the instant application. The computer being enabled to perform a function does not mean that it will ever actually perform that functionality (i.e. "enabling" should be clarified and changed to a more definite term in order for it to carry patentable weight).

Similar objection and explanation as above is made to the recitation of "adapted for" found in claim 36, lines 2, & 9.

Claims 21, 28, and 36 recite the limitation "enabling" which is indirect, suggest optionally, and passive which renders any recitation claimed after not be given patentable weight. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 22, 25-27, 32-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22 recites the limitation "the closeness", in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claims 25-27, and 32-35 recites the limitation "the histogram". There is insufficient antecedent basis for this limitation in the claim.

Regarding claims 25-27, and 32-35, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 21, 23-28, 30-34, and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al. (U.S. Pub. No. 2004/0225686 A1).

As to claims 21, and 28, Li et al. teaches a method comprising:

obtaining an image and comparing the image to at least one stored image to identify one or more similar images wherein the at least one stored image is stored within an image database in association with at least one keyword (See page 1, paragraph 0005, also see page 5, paragraph 0066);

producing at least one primary keyword based on the at least one keyword associated with the one or more similar images (See page 5, paragraph 0069);

producing at least one finer scale keyword wherein each one of the at least one finer scale keyword is likely to occur in association with at least one of the at least one primary keyword, wherein the likelihood of any keyword occurring in association with another keyword is determined using keyword statistics, and wherein the keyword statistics are maintained within a database statistics module (See Figure 13, step 62, also see page 5, paragraph 0068);

presenting the at least one primary keyword and the at least one finer scale keyword to a user, enabling the user to select at least one accepted keyword and wherein any one of the at least one primary keyword or any one of the at least one finer scale keyword can be one of the at least one accepted keyword (See page 6, paragraph 0078, and see page 8, paragraph 0092); and

storing the image within the image database and in association with the at least one accepted keyword and updating the keyword statistics (See page 3, paragraphs 0047-0048).

As to claims 23, and 30, Li et al. teaches wherein image similarity is based on at least one factor and wherein one of the at least one factor is determined using a content based image retrieval module (See Figure 14, step 250).

As to claims 24, and 31, Li et al. teaches wherein there are at least two primary keywords and further comprising:

determining a likelihood metric for each one of the at least two primary keywords wherein a keyword associated with a stored image is more probable if the stored image is more similar to the image (See abstract, also see page 5, paragraph 0068); and

wherein the at least two primary keywords are presented to the user in order of descending probability (See page 5, paragraph 0068, wherein “descending probability” reads on “ranking”).

As to claims 25, and 32, Li et al. teaches wherein there are at least two finer scale keywords and further comprising:

using the database statistics to determine a likelihood metric for each one of the at least two finer scale keywords wherein the histogram count is an example of a likelihood metric (See page 3, paragraph 0037); and

wherein the at least two finer scale keywords are presented to the user in descending order (See page 5, paragraph 0068, wherein “descending probability” reads on “ranking”).

As to claims 26, and 33, Li et al. teaches wherein there are at least two primary keywords, wherein there are at least two finer scale keywords (See page 6, paragraph 0073, wherein “at least two” reads on “plurality of keywords, i.e. 3.6 keywords), and further comprising:

determining a likelihood metric for each one of the at least two primary keywords wherein a keyword associated with a stored image is more probable if the stored image is more similar to the image (See page 4, paragraph 0058);

using the database statistics to determine a likelihood metric for each one of the at least two finer scale keywords wherein the histogram count is an example of a likelihood metric (See page 5, paragraph 0066); and

wherein the at least two primary keywords are presented to the user in order of descending probability and wherein the at least two finer scale keywords are presented to the user in descending order (See page 5, paragraph 0069).

As to claims 27, and 34, Li et al. teaches wherein there are at least two primary keywords, wherein there are at least two finer scale keywords (See page 6, paragraph 0073, wherein “at least two” reads on “plurality of keywords, i.e. 3.6 keywords), and further comprising:

determining a likelihood metric for each one of the at least two primary keywords wherein a keyword associated with a stored image is more probable if the stored image is more similar to the image (See page 4, paragraph 0058);

using the database statistics to determine a likelihood metric for each one of the at least two finer scale keywords wherein the histogram count is an example of a likelihood metric and wherein the probability of each one of the at least two primary keywords effects the likelihood of each one of the at least two finer scale keywords (See page 5, paragraph 0066); and

wherein the at least two primary keywords are presented to the user in order of descending probability and wherein the at least two finer scale keywords are presented to the user in descending order (See page 5, paragraph 0068, wherein “descending probability” reads on “ranking”).



As to claims 36, and 32, Li et al. teaches a system comprising:

an image database adapted for storing images in association with keywords wherein each stored image is associated with at least one keyword (See Figure 12, 120);

a content based image retrieval module that can compare a first image with a second image to produce similarity metric (See Figure 12, 160);

a database statistics module for providing keyword statistics regarding the likelihood that a second keyword is associated with an image when a first keyword is associated with that image (See Figure 12, 130);

a user interface (UI) (See page 8, paragraph 0093) adapted for providing user intervention during image archiving and further enables user acceptance of system suggestions, user selection of system suggestions, and enables user entry of user-provided keywords for association with images (See page 5, paragraph 0066); and

wherein the keyword statistics are updated whenever an image associated with keywords is stored within the image database (See page 3, paragraph 0047).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 22 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (U.S. Pub. No. 2004/0225686 A1) in view of Li et al. (U.S. Pub. No. 2004/0177069 A1).

As to claims 22, and 29, Li et al.'686 does not teach wherein image similarity is based on at least one factor and wherein one of the at least one factor is the closeness in time of image acquisition.

Li et al.'069 teaches wherein image similarity is based on at least one factor and wherein one of the at least one factor is the closeness in time of image acquisition (See Li et al.'069 page 3, paragraph 0031).

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified Li et al.'686 by the teaching of Li et al.'069 to include wherein image similarity is based on at least one factor and wherein one of the at least one factor is the closeness in time of image acquisition since it introduces quantifying characterization to judge the degree of similarity between two images stored in the database (See Li et al.'069 page 1, paragraph 0005).

#### ***Allowable Subject Matter***

9. Claim 35 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

10. Applicant's arguments with respect to claims 21-36 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Li et al. (U.S. Patent No. 6,901,411) teaches statistical biagram model for CBIR.

Scanlon et al. (U.S. Pub. No. 2002/0065813) teaches image relationships based on historical data.

Markus Koskela & Jorma Laaksonen. *Using Long -Term Learning to Improve Efficiency of Content-Based Image Retrieval*. Laboratory of Computer & Information Science, Helsinki University of Technology. Workshop 2003.

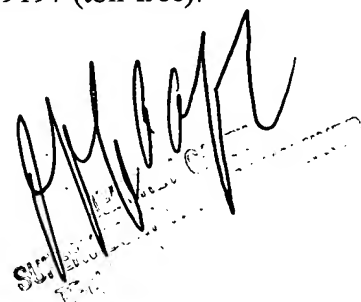
Ze-Nian Li, Osmar R. Zaiane, & Zinovi Tauber. *Illumination Invariance and Object Model in Content-Based Image and Video Retrieval*. School of Computing Science, Simon Fraser University, Canada. October 2, 1997.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neveen Abel-Jalil whose telephone number is 571-272-4074. The examiner can normally be reached on 8:30AM-5:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Neveen Abel-Jalil  
February 5, 2006

A handwritten signature in black ink, appearing to read 'N. Abel-Jalil', is written over a faint, rectangular stamp. The stamp contains some illegible text and a circular emblem.